
INTRODUCING A LIGHTWRITER

**Step-by-Step Tutorials
for Therapists and Clients**

**Information for Therapists
and Carers**

by Catherine Harris MRCSLT

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Introduction

Lightwriters are small portable text-to-speech communication aids.

They **are** extremely easy to use at their most **basic** level of function i.e. **TURN ON AND TYPE**

However, as a specialist therapist working with AAC, I have recognised that however simple the manuals are meant to be, they may represent a real challenge to both therapists and clients.

The Core tutorials in this pack were developed to be used with clients as a step-by-step introduction to the Lightwriter. Less frequently used functions are included in the Advanced section. The complete pack can be used for equipping therapists and others so that they can feel more confident and effective in the support role.

The record sheet can be updated as the functions are mastered.

The pack is not intended to replace the manual and should not be presented to the client without the appropriate support, ideally over a minimum of 3 sessions.

Please do not photocopy the sheets as they are copyright and they are presented in colour as part of the whole package.

There has been positive feedback from both therapists and clients who have helped in piloting this pack and it is hoped that it will be of practical benefit to all those who are involved in using a Lightwriter.



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Acknowledgements

With grateful thanks to my colleagues in Portsmouth and especially to Paula Pyke for her administrative support. Also appreciation for my clients and their carers who have been so enthusiastic and encouraging about this resource.

Dedication

In memory of June Henderson, a brave and intelligent woman, who quickly mastered the Lightwriter so that she could continue to enquire about the wellbeing of others. She died in December 2001 from M.N.D. and is remembered by those who knew her with respect and love.

Feedback

I would be pleased to hear any feedback on this pack or suggestions for additions or improvement. Please contact me at: CAHarris78551000@aol.com

Overview

This Training Package is divided into 2 sections:

1 **User Training Pack**

This section is designed for working with Lightwriter users and contains 2 sections:

a) **Direct Selection**

User Guides for people accessing the Lightwriter with the keyboard.

b) **Scanning**

User Guides for people accessing the Lightwriter with one or two switches.

2 **Information for Therapists and Carers**

This section is aimed at facilitators and provides information on how to set up most of the Lightwriter's commonly-used features.

Instructions for Use

- 1 Open **User Training Pack.pdf** or **Information for Therapists and Carers.pdf** as appropriate.
 - 2 Preview the contents of the training pack on your computer and print out relevant pages for use with the client or your own reference. These documents are designed to be printed in colour for full benefit.
 - 3 It is suggested that if possible the pages are laminated for ease of handling and durability for use with clients. Some topics print out over 2 pages, and these may be laminated back-to-back.
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Lightwriter Training: Information for Therapists

Contents

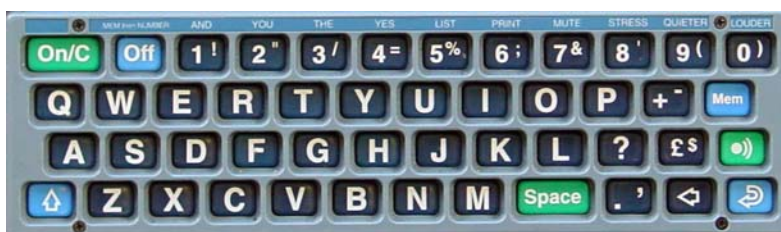
Changing the Keyboard Layout	5
Instructions for using Switches	6
Setting up a Plug-In Scan Module	7
Setting up Scanning Lightwriters	8
Setting up a Printer	9
Setting up Multiple Word Predictions on an SL87	10
Setting up Extended Text on an SL87	11
Resetting Lightwriter Setups	12
Resetting Lightwriter Memories	12
Cleaning and Decontaminating a Lightwriter	13

Changing the Keyboard Layout

The keyboard layout can be changed between QWERTY and ABC.
This activity requires a small cross-head screwdriver and takes about 5-10 minutes.



1. Press **On/C**
2. Type **EXPERT** then press **Mem** then **↻** to enter **Expert Setups** and additional setups are now added to setup list.
3. Press the **K** key repeatedly to find **Keyboard** setup.
4. Change to **QWERTY** or **ABC** setting using **+⁻** key
5. Press **Off**
6. Unscrew the 4 keyguard-retaining screws and remove the keyguard.
7. Remove the 26 alphabet keys (leave all the other keys in place).
8. Moisten the rubber pegs with a damp cloth to prevent the keys sticking when being refitted.
Replace the 26 keys in the alternative layout, checking they are aligned and sitting squarely on the rubber peg.
QWERTY layout for reference:



Alternatively- to find the function of a key: turn Lightwriter on and press each rubber peg on the keyboard and screen will show which key it is.

9. Carefully replace keyguard and replace and screw down the retaining screws, taking care not to over-tighten the 4 screws.

Instructions for Using Switches

1. Carefully assess all voluntary movements
2. Select the right switch to suit the user's abilities
3. Ensure switch is accessible, mount if necessary

Assessment of Voluntary Movements

When considering a switch to operate a communication aid, or some other device such as a page turner, the most important thing is to determine over which body movement(s) the user has good voluntary control.

The assessment needs to take into account a number of factors:

- the number of voluntary movements (e.g. if 2 switch scanning seems appropriate, whether they have sufficient movements)
- amount of movement
- muscle strength
- muscle fatigue
- reflex speed
- timing skills
- repeatability
- reliability
- spasticity
- spasm
- relaxation or release speed
- likelihood of this voluntary movement deteriorating in future
- possibility of other voluntary movement(s) improving in future
- possible need to reserve a particular strong/reliable voluntary movement for other control requirements (e.g. electric wheelchair)

Assessment Technique

It is generally found to be helpful to assess these voluntary movements initially with the switch not connected to the communication aid or other device since inadvertent operation may be distracting and frustrating to the user, but just to connect the switch to a switch tester with auditory feedback to give a simple audible beep on each switch operation to give very clear feedback of the switch's operation.

Ask them to 'beep' when you snap your fingers - this will show how quickly and how reliably the switch can be operated. If their timing skills are poor or reactions are slow, step scanning may be preferable to automatic scanning. Ask some "Yes/No" questions to which both you and the client know the answer, requesting 1 beep for "Yes", and 2 beeps for "No". Assess also their ability to make a quick 'double click' - this is used on the scanning Lightwriter to 'cancel'.

Having established which body movement is most suitable for the particular user and having given both the user and the assessor confidence while using the switch tester that they can regularly and reliably operate the switch, only then it is recommended to connect up to the aid.

Mounting

This is particularly important for some users and unnecessary for others. It is essential that the switch is in the correct position at all times to make it accessible, and that it does not move away while being operated.

For some users it may be necessary to consider a mechanical mounting system attached to their wheelchair, table, chair, or bed. This may constrain the switch being moved easily with user.

For head movement operation it is recommended to mount the switch with velcro on a block or wedge of thick foam so it will not be a solid obstacle if they go into spasm, thus avoiding injury.

Some users will benefit from the switch being attached to a plate for stabilisation, so they can hold the switch steady with one hand and operate it with the other.

Most switches may be mounted most easily using double-sided velcro or double-sided adhesive tape. The click switch has two holes in the base for No 4 self-tapping screws.

(from Toby Churchill Ltd.'s handbook)

Setting up a Plug-in Scan Module

This activity steps through changing Lightwriter setups for a Plug-in Scan Module. This activity takes about 1 minute.



1. Press **On/C**
2. Press **Mem** then **↺** to enter the setup menu.
3. Press the **P** key repeatedly to find **Port 1** setup.
4. Change setting to **Scanner** using **+/-** key
5. Press the **P** key once or twice more to find the **Predict After** setup.
6. Change setting to **Off / 1 / 2 / 3** as required using **+/-** key
7. Press **Off**
8. Plug the Plug-in Scan Module into **Port 1** (right hand side of Lightwriter)
9. Plug a switch into **Switch 1**, (and a 2nd switch into **Switch 2**, if using 2- switch scanning) (these are labelled **Scan 1** and **Scan 2** on older Lightwriters).
10. The Lightwriter and Scan Module are now ready to operate.

Setting up Scanning Lightwriters

This activity steps through changing Lightwriter setups for scanning.
This activity takes about 2 minutes.



SL85 only:

1. Plug the Plug-in Keyboard into **Port 1** (right hand side of Lightwriter)
2. Press the **Speed** button then the **Delete** button on the front of the SL85.
3. Screen shows **Port1: keyboard** The Plug-in Keyboard is now active.

All models

- 1 Press **On/C**
- 2 Press **Mem** then **↶** to enter the setup menu.
- 3 Press the **P** key once or twice more to find **Predict After:** setup.
- 4 Change **Word Prediction** setting to **Off / 1 / 2 / 3** as required using **+/-** key.
- 5 Press the **S** key repeatedly to find **Scan Speed:** setup.
- 6 Change the **Scan Speed** setting using **+/-** key.
- 7 Press the **A** key repeatedly to find **Auditory Scan:** setup.
- 8 Change the **Auditory Scan** setting to **Beep, Speak, or Off** using **+/-** key.
- 9 *if 2-switch step scanning is required: Press the **S** key repeatedly to find **Scan (1):** setup.*
- 10 *Change the **Scan (1):** setting from **Auto** to **Manual** using **+/-** key.*
- 11 (Change any other setups as required)
- 12 Press **Off**
- 13 If using SL85: remove the Plug-in Keyboard if it's no longer being used.
- 14 If using a Plug-in Scan Module, plug the Scan Module into **Port 1** (right hand side of Lightwriter) The Lightwriter and Scan Module are now ready to operate.
- 15 Plug a switch into **Scan1**, (and a 2nd switch into **Scan2**, if using 2-switch scanning)
- 16 Press the Scan Switch (or Scan Switch1 if using 2-switch scanning), and the Lightwriter will wake up and scanning will start automatically.

Setting up a Printer

This activity steps through changing Lightwriter setups for a Printer.
This activity takes about 30 secs.



- Press **On/C**
- Press **Mem** then **↶** to enter the setup menu.
- Press the **P** key repeatedly to find **Port 1** setup (or **Port 2**, if **Port 1** is already being used)
- Change setting to **Printer** using **+/-** key
- Press the **P** key once more to find **Printer** setup.
- Change setting to **MiniPrinter** (or **DeskJet**, etc for A4 printers if required) using **+/-** key
- Press **Off**
- Plug the **Printer** into **Port 1** (right hand side of Lightwriter) (or **Port 2**, left hand side of Lightwriter)

To print:

Keyboard Lightwriter

- Press **On/C**
- Type some text
- Press **Mem** then **6** to print

Scanning Lightwriter

- Press Scan switch to turn on Lightwriter
- Enter some text
- Select **⇒** then **⇒** then **Print** to print

Setting up Multiple Word Predictions on an SL87

The scan screen can be set to display eight predictions instead of just one, each selected using the number keys. It cannot be used at the same time as the Extended Text mode. This can be used only in direct selection mode. This feature is ideal for people with word finding difficulties and head-pointer users in particular.



1. Press **On/C**
2. Press **Mem** then **↶** then **↷** then **⌂** to enter *Advanced Setups*, and additional setups are now added to setup list.
3. Press the **K** key repeatedly to find **Kbd screen** setup.
4. Change the setting to **Predict** using **+/-** key.
5. Press the **P** key repeatedly to find **Predict after** setup.
6. Change the setting to **1, 2 or 3** using **+/-** key.
7. Press **Off**
8. The system is now ready for use.

Setting up Extended Text on an SL87

The scan screen can be set to display four lines of small-sized text, two lines of medium-sized text, or one line of large text.

This can be used only in direct selection mode.

It cannot be used at the same time as the *8 Predictions* mode.

It is designed for keyboard users with short-term memory difficulties (several sentences can be viewed on screen at once), or for users with severely impaired vision.



four lines of small text



two lines of medium text



one line of large text

1. Press **On/C**
2. Press **Mem** then **↶** then **⬆** then **⌘** to enter Advanced Setups, and additional setups are now added to setup list.
3. Press the **K** key repeatedly to find **Kbd screen** setup.
4. Change the setting to **Small**, **Medium** or **Large** using **+/-** key.
5. Press **Off**
6. The system is now ready for use

Resetting Lightwriter setups

This activity steps through resetting all the Lightwriter setups to the default values. This activity takes about 15 secs.

1. Press **On/C**
2. Press **Mem** then **Mem** then **Mem**
3. Screen says **Functions** Press the **L** key.
4. Screen says **Which setup-group?** Press **0** to load factory setups.
5. Screen says **Sure? Y=OK** Press **Y** to confirm.
6. Screen says **setup-group loaded** briefly, and then clears.
7. Press **Off**
8. The setups are now all reset to the factory setups.

Resetting Lightwriter memories

This activity steps through resetting all the Lightwriter memories, and restoring the factory memories. This activity takes about 15 secs.

1. Press **On/C**
2. Press **Mem** then **Mem** then **Mem** then **↑** then **⌂**
3. Screen says **Advanced Functions** Press the **X** key.
4. Screen says **Erase Mems? Y=OK**. Press **Y** to confirm.
5. Screen says **Really Sure? Y=OK** Press **Y** to confirm.
6. Screen says **Erase Backups? Y=OK**. Press **Y** to confirm.
7. Screen says **Really Sure? Y=OK** Press **Y** to confirm.
8. The memories are now all erased, and the factory memories are restored, (eg: H = HELLO HOW ARE YOU).
9. Press **Off**

Cleaning and Decontaminating a Lightwriter

This document describes how to clean and decontaminate Lightwriter equipment.
This activity takes about 5 minutes.

The Lightwriter and associated equipment may become dirty through a variety of means such as saliva, mucus, spilt food and drink, and from contact with dirty hands. There may also be a need to decontaminate equipment to reduce the risk of infection transmission.

Cleaning Procedure

The recommended cleaning procedure is to wipe affected external surfaces with a cloth soaked in hot water with some washing-up liquid, and use a nail brush for more stubborn dirt.

The Lightwriter is splashproof but not waterproof. Do not allow water to enter inside the Lightwriter. It is recommended that you turn the Lightwriter on end with the charger point lowest and to clean the Lightwriter in this position, reducing the risk of any water entering inside the Lightwriter.

If the Lightwriter is fitted with a LightTouch keyboard, this may be dismantled by removing the 4 screws in the keyguard after which the keyguard and the 48 keys can then be lifted off. The keyguard and 48 plastic keys can be soaked in water and given a more thorough cleaning. Ensure the plastic keys and keyguard are dry before re-fitting. Moisten the rubber pegs with a damp cloth or saliva to prevent the keys sticking when being refitted. Keyboard layout:



Decontamination Procedure

There may be a requirement to decontaminate a Lightwriter and/or associated equipment after use to reduce the risk of infection transmission to other people. The *Central Public Health Laboratory* (a division of the *Department of Health* in the UK) has recommended the following decontamination procedure for this type of low-risk equipment:

- clean the external surfaces with a disposable paper wipe moistened with warm detergent solution. (*see Cleaning Procedure*)
- allow the surfaces to dry.
- wipe the surfaces with a commercially-available alcohol-impregnated disposable wipe.

Note that this equipment should not be sterilised, nor should disinfecting fluids be used as these may attack the plastic materials, and can make the transparent display filters go opaque.

Caution:

- **do not immerse equipment in water**
- **do not use disinfecting fluids (such as surgical spirit, Hibitane (brand name for chlorhexidene) or Cidex (brand name for 2% alkaline-buffered glutaraldehyde))**
- **do not autoclave equipment or expose to elevated temperatures**

Carry Bag

The soft Carry Bag for the Lightwriter contains porous foam and should not be put through a washing machine. If it becomes dirty, the outside may be cleaned by wiping it with a cloth soaked in warm water with some washing-up liquid, and using a nail brush for more stubborn dirt. Avoid soaking the Carry Bag as it will take a long time to dry out.

The Carry Bag cannot be decontaminated, and should be disposed of if cross-infection is a possibility